

In re Patent Application of:
PARSCHE
Serial No. **10/694,148**
Filing Date: **October 27, 2003**

REMARKS

Claims 1-29 remain in this application. No claims have been cancelled. Claims 1 and 11 have been amended.

Applicant thanks the Examiner for the detailed study of the application and prior art. At the outset, Applicant has amended independent claims 1 and 11 to recite that the radiating ring element is formed as a substantially solid spherical sector. This is opposite from the cited U.S. Patent No. 6,600,451 to Mimura et al. (hereinafter "Mimura") used by the Examiner to reject as anticipated or obvious claims 1-6 and 11-15.

Applicant notes that Mimura is specifically directed to a ring resonator antenna formed from two conducting lines arranged in a ring form in a TEM-mode transmission line. The end of one of the lines is connected to the end of the other line with opposite polarity. Applicant stresses that Mimura is directed toward the type of antenna noted in the Background of the Invention section of the instant application. As explained, this prior art uses a wire dipole or loops of coil, some of them based on Maxwell or Wheeler antenna design systems. It is clear from FIG. 1 of Mimura that the TEM-mode transmission lines form a ring or loop, similar to the prior art noted in the Background of the Invention section of the instant application.

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The claimed antenna design as now presented in this Amendment overcomes the disadvantages of using different turns of wire or additional windings that "shade" an antenna aperture against adjacent turns of wires that interrupt the field. The claimed antenna as now set forth in this Amendment has a shape that enhances its gain relative to its size and provides the greatest gain in efficiency and the shortest length by using a spherical geometry and providing the greatest surface area for the smallest volume, using the radiating ring element formed as a substantially solid spherical sector.

In one aspect as in claim 1, the spherical sector has about a one-half wavelength circumference in natural resonance for obtaining uniform current distribution and enhancing the gain relative to the size of the antenna. In another aspect as set forth in claim 11, this substantially solid spherical sector has a capacitive element formed therein for forcing the radiating ring element to resonance. In yet another aspect as set forth in allowed claim 20, a variometer can feed the radiating ring element and is operative for varying the feed impedance.

Nowhere does Mimura or any other cited prior art disclose or suggest either singularly or in combination the radiating ring element formed as a substantially solid spherical sector and either having about a one-half wavelength

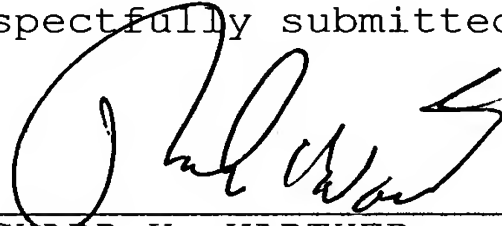
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circumference and natural resonance or the capacitive element formed therein for forcing the radiating ring element to resonance.

Applicant contends that the present case is in condition for allowance and respectfully requests that the Examiner issue a Notice of Allowance and Issue Fee Due.

If the Examiner has any questions or suggestions for placing this case in condition for allowance, the undersigned attorney would appreciate a telephone call.

Respectfully submitted,



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CERTIFICATE OF MAILING

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: **MAIL STOP AMENDMENT, COMMISSIONER FOR PATENTS, P.O. BOX 1450, ALEXANDRIA, VA 22313-1450**, on this 28th day of September, 2005.